

MODIS IOT Weekly Report

Mission Operations Days: 2000/162 to 2000/168

June 9, 2000 20:00:00 GMT to June 16, 2000 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in Science Mode

MODIS has no known Anomalies

Blackbody	A On; B Off	Nominal
Calibration Electronics	A On; B Off	Nominal
Control Processor	A On; B Off	Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A On; B off	Nominal
FIFO Memory	1 & 2 On; 3 & 4 Off	Nominal
Format Processor	A On; B off	Nominal
PC FPA	A On	Nominal
Power Supply: 1	On	Nominal
2	Off	Nominal
PV FPAs: VIS	A On	Nominal
NIR	A On	Nominal
SMIR	A On	Nominal
LWIR	A On	Nominal
Radiative Cooler:		
Outgas Heaters	Off	Nominal
LWIR FPA Heater	On	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A On; B off	Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A On; B Off	Nominal
Flight Software	Rev BD	Nominal
Inhibit Ids Set	None	Nominal
TMONs enabled	66,67	Nominal

This Week's Completed MODIS Activities:

Saturday, June 10, 2000

None

Sunday, June 11, 2000

None

Monday, June 12, 2000

164/05:54:08 ATC OA15 SD/SDSM Open

164/12:29:39 ATC OA16 SD/SDSM Screened

164/20:02:00 ATC - Blackbody to 270K

Tuesday, June 13, 2000

165/14:00:00 ATC Blackbody to 315K

165/14:18:00 Real-time Set Blackbody duty cycle to 100%

165/21:00:00 ATC Blackbody to 270K

165/21:00:00 Real-time Set Blackbody duty cycle to 33%

Wednesday, June 14, 2000

166/10:38:21 ATC OA16 SD/SDSM Screened

166/19:00:00 ATC Blackbody to 290K

Thursday, June 15, 2000

CERES Yaw Man #1 (2000/17:43:14 – 18:27:14), yaw degree = +10.24

CERES Yaw Man #2 (2000/21:01:00 – 21:45:00), yaw degree = +10.24

167/17:53:56 ATC OA15 SD/SDSM Open Double

167/21:11:42 ATC OA16 SD/SDSM Screened Double

Friday, June 16, 2000

168/10:25:54 ATC OA16 SD/SDSM Screened

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Saturday, June 17, 2000

None

Sunday, June 18, 2000

None

Monday, June 19, 2000

171/07:38:57 ATC OA15 SD/SDSM Open

171/09:17:50 ATC OA16 SD/SDSM Screened

171/20:02:00 ATC - Blackbody to 270K

Tuesday, June 20, 2000

172/14:00:00 ATC Blackbody to 315K

172/14:?? Real-time Set Blackbody duty cycle to 100%

172/21:00:00 ATC Blackbody to 270K

172/21:?? Real-time Set Blackbody duty cycle to 33%

Wednesday, June 21, 2000

173/09:15:26 ATC OA16 SD/SDSM Screened

173/18:52 ?? Real-Time - Set SMIR Itwk / Vdet to 79 / 190

MOD_VDET_SWEEP('SMIR',0,0,79,190,0,0,1)

173/19:00:00 ATC Blackbody to 290K

* 173/19:05:48 ATC Load - OA25: SRCA 1W Spatial
with Sector Rotation, using both the BC and ND Filter

MOD_OA25_1W_Spa_Sec_BCnND_A

* 173/20:42:48 ATC Load - OA25: SRCA 10W Spatial
with Sector Rotation and Spectral Slit, using both the BC and ND Filter

MOD_OA25_10W_Spa_S_SecBCND_A

173/21:34:21 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)

MOD_OA04_NIGHT_RATE (00:03:15 early)

173/21:41:30 MODIS Lunar Roll #1 (Begin)

173/21:50:10 ATC Load - Set Formatter to Day Rate (for Lunar Roll)

MOD_OA03_DAY_RATE

173/21:50:12 ATC Load - Set SCIABNORM Flag to ABNORM

MOD_OA08_ROLL_MAN (MOD_SET_FR_SCIABNORM TO ABNORM)

173/21:50:14 ATC Load - PC DC Restore OFF

MOD_OA07_PC_DCR_OFF

173/21:50:16 ATC Load - PV DC Restore OFF

MOD_OA07_PV_DCR_OFF

173/21:50:18 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)

MOD_OA14_SECT_ROT_N3072

173/21:53:25 (Center of Moon in SV)

173/21:56:32 ATC Load - Sector Rotation to 0 (Normal)

MOD_OA14_SECT_ROT_ZERO

173/21:56:34 ATC Load - PC DC Restore ON

MOD_OA07_PC_DCR_ON

173/21:56:36 ATC Load - PV DC Restore ON

MOD_OA07_PV_DCR_ON

173/21:56:38 ATC Load - Set SCIABNORM Flag to NORM

(Ending MOD_OA08_ROLL_MAN) (MOD_SET_FR_SCIABNORM TO NORM)

173/21:56:40 ATC Load - Set Formatter to Night Rate (for Lunar Roll)

MOD_OA04_NIGHT_RATE

173/22:03:00 MODIS Lunar Roll #1 (End)

173/22:30:18 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)
MOD_OA03_DAY_RATE (00:03:15 late)

Wednesday, June 21, 2000

173/22:40 ?? Real-Time - Set SMIR Itwk / Vdet to 110 / 226

MOD_VDET_SWEEP('SMIR',0,0,110,226,0,0,1)

173/23:13:14 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)

MOD_OA04_NIGHT_RATE (00:03:15 early)

173/23:20:15 MODIS Lunar Roll #2 (Begin)

173/23:28:43 ATC Load - Set Formatter to Day Rate (for Lunar Roll)

MOD_OA03_DAY_RATE

173/23:28:45 ATC Load - Set SCIABNORM Flag to ABNORM

MOD_OA08_ROLL_MAN (MOD_SET_FR_SCIABNORM TO ABNORM)

173/23:28:47 ATC Load - PC DC Restore OFF

MOD_OA07_PC_DCR_OFF

173/23:28:49 ATC Load - PV DC Restore OFF

MOD_OA07_PV_DCR_OFF

173/23:28:51 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)

MOD_OA14_SECT_ROT_N3072

173/23:31:58 (Center of Moon in SV)

173/23:35:05 ATC Load - Sector Rotation to 0 (Normal)

MOD_OA14_SECT_ROT_ZERO

173/23:35:07 ATC Load - PC DC Restore ON

MOD_OA07_PC_DCR_ON

173/23:35:09 ATC Load - PV DC Restore ON

MOD_OA07_PV_DCR_ON

173/23:35:11 ATC Load - Set SCIABNORM Flag to NORM

(Ending MOD_OA08_ROLL_MAN) (MOD_SET_FR_SCIABNORM TO NORM)

173/23:35:13 ATC Load - Set Formatter to Night Rate (for Lunar Roll)

MOD_OA04_NIGHT_RATE

173/23:41:04 MODIS Lunar Roll #2 (End)

Thursday, June 22, 2000

174/00:09:11 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

MOD_OA03_DAY_RATE (00:03:15 late)

Thursday, June 22, 2000

174/00:25 ?? Real-Time - Set SMIR Itwk / Vdet to 100 / 218

MOD_VDET_SWEEP('SMIR',0,0,100,218,0,0,1)

174/00:52:07 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)

MOD_OA04_NIGHT_RATE (00:03:15 early)

174/00:58:59 MODIS Lunar Roll #3 (Begin)

174/01:07:16 ATC Load - Set Formatter to Day Rate (for Lunar Roll)

MOD_OA03_DAY_RATE

174/01:07:18 ATC Load - Set SCIABNORM Flag to ABNORM

MOD_OA08_ROLL_MAN (MOD_SET_FR_SCIABNORM TO ABNORM)

174/01:07:20 ATC Load - PC DC Restore OFF

MOD_OA07_PC_DCR_OFF

174/01:07:22 ATC Load - PV DC Restore OFF

MOD_OA07_PV_DCR_OFF

174/01:07:24 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)

MOD_OA14_SECT_ROT_N3072

174/01:10:31 (Center of Moon in SV)

174/01:13:38 ATC Load - Sector Rotation to 0 (Normal)

MOD_OA14_SECT_ROT_ZERO

174/01:13:40 ATC Load - PC DC Restore ON

MOD_OA07_PC_DCR_ON

174/01:13:42 ATC Load - PV DC Restore ON

MOD_OA07_PV_DCR_ON

174/01:13:44 ATC Load - Set SCIABNORM Flag to NORM

(Ending MOD_OA08_ROLL_MAN) (MOD_SET_FR_SCIABNORM TO NORM)

174/01:13:46 ATC Load - Set Formatter to Night Rate (for Lunar Roll)

MOD_OA04_NIGHT_RATE

174/01:19:37 MODIS Lunar Roll #3 (End)

174/01:48:05 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

MOD_OA03_DAY_RATE (00:03:15 late)

* 174/01:51:29 ATC Load - OA25: SRCA 1W Spatial
with Sector Rotation, using both the BC and ND Filter

MOD_OA25_1W_Spa_Sec_BCnND_A

* 174/03:25:48 ATC Load - OA25: SRCA 10W Spatial
with Sector Rotation and Spectral Slit, using both the BC and ND Filter

MOD_OA25_10W_Spa_S_SecBCND_A

174/04:33:00 ?? Real-Time - Set SMIR Itwk / Vdet to 110 / 226

MOD_VDET_SWEEP('SMIR',0,0,110,226,0,0,1)

Friday, June 23, 2000

175/?? ATC OA16 SD/SDSM Screened

* MOD_OA25_1W_Spa_Sec_BCnND_A

* MOD_OA25_10W_Spa_S_SecBCND_A

These are the requested modified versions of the SRCA Spatial Tests. Each uses a -3400 Sector Rotation (EA Sector viewing of the SRCA) and runs the normal 36 scans per 10% stepping of the EA Sector Delay. This first portion of the test uses the source Beam Combiner. Afterwards, the test is repeated with the Neutral Density filter in place of the Beam Combiner and only utilizing 8 scans per 10% stepping of the EA Sector Delay. The 10 Watt test uses the Spectral Slit instead of the Along Scan Reticle.

Maneuvers:

Tue, June 20, 2000 – Drag Makeup Maneuver

Wed, June 21, 2000 – MODIS Roll #1 (2000/173/21:50:10 – 21:56:40), roll degree = -18.0044

Wed, June 21, 2000 – MODIS Roll #2 (2000/173/23:28:43 – 23:35:13), roll degree = -17.4518

Wed, June 21, 2000 – MODIS Roll #3 (2000/174/01:07:16 – 01:13:46), roll degree = -16.9070

MODIS Anomalies:

MODIS appears to have stopped controlling on the LWIR Focal Plane. Analysis is underway.

General Instrument Comments:

MODIS is in Science Mode on the A-side with the SVD and NAD open.

MODIS Telemetry Trends:

Telemetry is nominal.

Non-MODIS Significant Events:

Science Data Losses 159/20:00 – 160/20:00:

4,6362 CADUs of MODIS (equivalent to 31 sec. Day Mode) lost at 160/16:32:33z due to FOT Ops. Error. FOT failed to implement workaround for very high MODIS Buffer amount (86% full). Lockup loss was overwritten before it could be played back.

Additional setbacks from the Ampex tape drive anomalies at White Sands have resulted in numerous data processing backlogs. The following days are still being processed (in the order listed):

147-150, 131-136

Limited Life Item Status:

SRCA 10W Lamp #1: 166.7 of 500 hours

SRCA 10W Lamp #2: 132.7 of 500 hours

SRCA 10W Lamp #3: 141.9 of 500 hours

SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 554.6 of 4000 hours

SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1373 of 3022 Movements

Nadir Aperture Door: 532 of 1316 Movements

Space View Door: 437 of 1316 Movements